Frankly Speaking

Planning For Post War Traffic

CONGRESS and the state highway departments are giving increased emphasis to urban street and parking needs, and to main routes between large population centers. The MacDonald Report on a national interregional highway system, emphasizing city problems, has been widely acclaimed as sound and necessary. Mayor LaGuardia of New York City has ordered plans to cope with a 75 percent increase in post-war motor traffic over pre-war peaks. Cities large and small are studying parking solutions, limited-access highway legislation, right-of-way land acquisitions; financing and blueprinting of construction drawing is gathering impetus, to the end that improvement of traffic facilities can begin quickly after war limitations end.

Land-use studies by city planners, and construction drawings by highway and city engineers, all are important in this work. But they are far from enough. The modern technique of traffic engineering is essential to the success of post-war highway and city planning.

The traffic engineer must translate the City Street Plan into usable form, and design safety and adequate operating capacity into the state highway. But he must do more. Even when a city eventually has a completely modern Major Street Plan, with expressways and adequate off-street parking facilities, this plan still will handle only 25 percent of all city traffic. Meanwhile, and afterward, there remains the problem of safe and convenient movement on *all* city streets.

The Institute's Post-War Traffic Planning Committee is working actively (see page 123) with municipalities and state highway departments, in implementing and carrying forward the Post-War Program of the Institute of Traffic Engineers outlined in the following two pages.

The challenge to prepare now for traffic increases is real and urgent. The traffic engineering profession came into being to cope with street congestion and accidents. Too often in the past we were forced to adopt poor and negative compromises, for lack of support on positive solutions. Let us pray that we have gained experience and eloquence. We need both to help persuade our community and state officials to take advantage now, during the wartime traffic breathing spell, of the opportunity and necessity to prepare fully and well for tomorrow's traffic.

D. Grant Mickle

Chairman, Post-War Traffic Planning Committee and Member, Board of Direction.

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Institute of Traffic Engineers Post-War Program

THIS "blueprint" for the application of traffic engineering in the post-war era is the result of a four-day work conference held from August 23-26, 1943, at Yale University under the joint sponsorship of the Institute of Traffic Engineers and the Yale Bureau for Street Traffic Research

In it are embodied the progressive, forward-looking opinions and convictions of the nation's leading traffic engineers. It was approved by the Institute of Traffic Engineers at the Fourteenth Annual Meeting in Chicago, October 3-5, 1943, and by the Board of Direction of the Institute of Traffic Engineers on January 4, 1944.

Copies of this special POST-WAR PLANNING ISSUE are being distributed to thousands of officials and organizations who will be interested in the official post-war program of the Institute. The Institute Post-War Planning Committee is implementing and carrying forward this program.

Only the physical problems and objectives of the practicing engineer are set forth herein. However, careful study is now being given to (a) the best means of furnishing better and more comprehensive traffic engineering training and (b) ways to improve traffic engineering administration.

This "blueprint", designed to give a broad viewpoint in programing post-war traffic engineering activities, is now serving as a working guide to the Institute of Traffic Engineers' Post-War Traffic Engineering Planning Committee in the development of a more detailed program for cities and states.

I. PROBLEMS—POST-WAR PLUS PRE-WAR

A. Post-war traffic engineering problems will include:
1. More vehicle-miles of highway travel.
2. New planning and changing land utilization in communities.
3. Old vehicles in poor condition mixed in traffic with new vehicles of improved design.
4. Increased terminal and parking problems.
5. Expansion of transport facilities and services.
6. Increased emphasis on time values in travel.

B. Pre-war and current deficiencies in traffic operations must be dealt with:
1. Critical parking and terminal facilities.
2. Inadequate and unsafe street facilities.
3. Improper geometric designs for traffic demands.
4. Improper application or non-uniform signs, signals, and markings.

These have resulted in high accident rates, congestion, inconvenience, and uneconomic highway service.

II. OBJECTIVES

The traffic engineering profession, realizing the impact that post-war conditions will have on the transport service which should be provided the highway user, is now restating its objectives in the light of the immediate post-war needs. These objectives are:

A. To "de-congest" urban centers and other critical locations to achieve:
   1. More rapid, uninterrupted flow.
   2. Attractive, convenient parking.
   3. Through roads for through traffic.
   4. Reduction of conflict between commercial and other traffic.

B. To "accident-proof" streets and highways for vehicles and pedestrians to the maximum degree.

C. Coordinate highway traffic plans and operation with:
   1. Highway planning and design.
   2. Related means of travel.
   3. Community planning.

III. MEANS OF ACHIEVING OBJECTIVES

A. Major Construction Projects. Post-War Public Works construction plans should fit new roadway layouts to anticipated type and volume of traffic use.
   1. All new projects should fit into a street and highway plan for the entire area. Many wide urban streets should also be divided.
   2. Rural roadways four lanes or more in width and all freeways should be divided.
   3. Streets should be widened only where intersections are infrequent and where additional full width lanes for moving traffic are provided. Widening of a short narrow section to provide a uniform street width may also be justified.
   4. Sidewalks and other pedestrian facilities should be built into the street systems of urban and suburban areas.
   5. New roadways should be designed so as to provide efficient traffic operation even at sacrifice of mileage of new construction.
   6. Off-street parking facilities should be provided along main arteries to make possible the elimination of parking from congested roadways.

B. Other Projects.
   1. Efficiency, safety, and flexibility of traffic movement should be increased by such projects as: modernizing traffic control devices; establishing one-way street systems in existing street patterns where justified; installing "no-left turn" regulations on major two-way streets; and applying "semi-limited" access principles on arterial streets.
   2. Pedestrian protection should be increased through such projects as: refuge islands, barricades, lighting, regulatory measures, and grade separations.

C. Factual investigation by competent technical authorities should be made as the basis for all post-war traffic improvements or changes in regulations to be sure that they are fitted to actual traffic needs.

IV. ACTION NEEDED NOW

If these objectives are to be achieved, careful and detailed plans must be ready for the moment war ends.

Operating Characteristic of Traffic-Actuated Control

by MARTIN BRUENING

VARIOUS methods have been tried from time to time to show, with the aid of diagrams, how Traffic-Actuated Control functions. Since with this form of traffic dispatching there are a great many possibilities and combinations of the momentary traffic situations on the streets and also of the various settings of the controller, it is not an altogether simple matter to develop diagrams to cover such a wide range of conditions.

The need and desirability, however, of such graphic demonstration exists and should be met. The Standards and Specifications Committee of the Institute of Traffic Engineers, in working on specifications for traffic-actuated controllers, recognizes this need and has made a beginning in developing diagrammatic presentations as indicated by the illustration accompanying this article, featuring four of a set of eight diagrams covering a specific group of conditions.

Before the diagrams were drawn, Mr. Wayne Volk, Secretary of the Standards and Specifications Committee had prepared a movable master diagram which with its rotating sectors readily lends itself to demonstrating a great number of traffic control situations. This movable diagram expanded in size was used in committee meetings to full advantage and quickly clarified control points which were not fully understood at first.

The Diagrams

The diagrams can be interpreted by referring to the set of definitions at the end of this article. Interpretation is facilitated further by keeping in mind the following points:

1. The diagrams DO NOT illustrate a dial or other working part on the controller.

2. The diagrams DO NOT illustrate in any way the *length* of time of any part or of the whole of the cycle. Each diagram is marked "TOTAL CYCLES VARIABLE".

3. The diagrams are entirely on a schematic and functional basis, the circular form indicating that as far as Street "A" is concerned, the cycle is made up of:

I. Green Interval
II. Yellow or clearance interval
III. Red Interval,

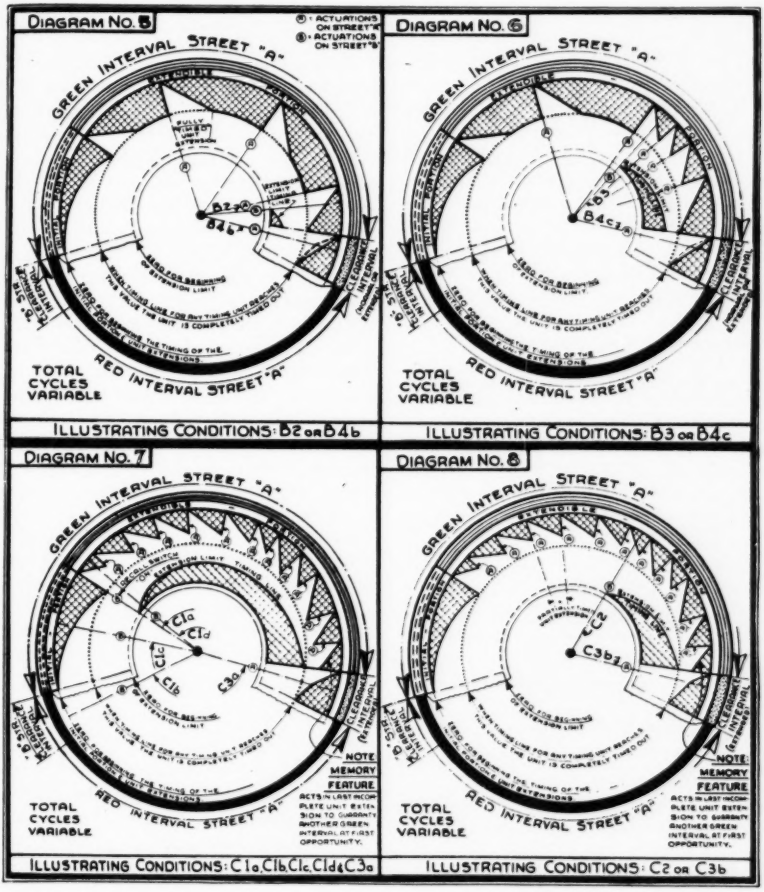
all being of variable lengths.

4. In each case the Green Interval on Street "A" has been brought into existence by actuations on Street "A" previous to the beginning of the "A" Street Green Interval.

5. The heart of the presentation is to be found in the dotted circular timing line labelled: "When Timing Line for any Timing Unit Reaches This Value the Unit Is Completely Timed Out".

6. At an equal distance to the right and left of the dotted circular timing line there is an additional circular timing line. The outer one represents the *Beginning* for the timing of the "INITIAL PORTION" and "UNIT EXTENSIONS". The inner one represents the *Beginning* for the timing of the "EXTENSION LIMIT".

7. The key to the entire presentation of timing functioning is comprised in that timing proceeds from these two circular "Begin" lines to the circular dotted line between, at the same time that all timing is pro-



ceeding around the circular presentation in a clockwise direction. The "spokes" on the circle, labelled "A" and "B" denote actuation on "A" or "B" street.

8. In the case of the Clearance Interval the timing line is shown dotted and bent where extended by an actuation. This is to signify that an actuation on Street "A" during the "A" Street Clearance Interval will yield a longer Clearance Interval.

The extended clearance interval represents a safety precaution which provides in the specifications: *"When the right-of-way leaves a street because of the expiration of the EXTENSION LIMIT or when a detector on any street is actuated during a CLEARANCE INTERVAL, the CLEARANCE INTERVAL shall be extended approximately two seconds beyond the time set on the dial. When the right-of-way leaves a street under any other*

conditions, the CLEARANCE INTERVAL shall be that which is set on the dial."

9. Throughout the presentation only the Green and Yellow (Clearance) Interval on Street "A" is shown in detail, the idea being that any one of the conditions illustrated could take place on Street "B" or even on Street "C" if it were a Three Movement Controller. The Red Interval on Street "A" is, therefore, shown solid.

Description of Conditions

A. NO ACTUATIONS ON "A" STREET DURING GREEN INTERVAL ON "A" STREET
1. Recall switch "on" for "B" Street: No actuations on "B" St.
2. Actuation on "B" Street during:
   (a) "B" Street clearance interval,
   (b) "A" Street initial portion,
   (c) First "A" Street unit extension.
3. Actuation on "B" Street following expiration of first "A" Street unit extension.
4. Actuation on "A" Street during "A" Street clearance interval:
   (a) Under condition A1
   (b) Under condition A2a
   (c) Under condition A2b
   (d) Under condition A2c
   (e) Under condition A3.

B. INTERMITTENT ACTUATIONS ON "A" STREET DURING GREEN INTERVAL ON "A" STREET
1. Actuation on "B" Street follows completion of an "A" Street unit extension.
2. Actuation on "B" Street occurs during a unit extension on "A" Street and there are no more actuations.
3. Actuation on "B" Street occurs during a unit extension and there are a few partially timed unit extensions on "A" Street.
4. Actuation on "A" Street during "A" Street clearance interval:
   (a) Under condition B1
   (b) Under condition B2
   (c) Under condition B3.

C. CONTINUOUS ACTUATIONS ON "A" STREET DURING AND AFTER GREEN INTERVAL ON "A" STREET
1. Call on "B" Street at beginning of "A" Street extendible portion due to:
   (a) Recall switch "on" for "B" Street,
   (b) Actuation on "B" Street during "B" Street clearance interval,
   (c) Actuation on "B" Street during "A" Street initial portion,
   (d) Actuation on "B" Street during first "A" Street unit extension.
2. Actuation on "B" Street during extendible portion.
3. Actuation on "A" Street during "A" Street clearance interval:
   (a) Under condition C1
   (b) Under condition C2.

An Example Explained

By resorting to the type of diagrammatic presentation herein described, it is believed that the more important characteristics of Traffic - Actuated Control are portrayed. Thus, for example, in diagram No. 6 a series of four initiations of the UNIT EXTENSION are shown in the latter part of the EXTENDIBLE PORTION. The first three are incomplete or partially timed because the diagonal portion of the timing line does not touch the dotted circular timing-out line. What actually has happened is that the vehicle on Street "A" producing the second actuation arrived on the detector before the expiration of the UNIT EXTENSION established by the first of the four vehicles. The second vehicle by its actuation initiated the UNIT EXTENSION timing anew which, however, again was cancelled before completion by the third vehicle actuation. The third vehicle actuation likewise was cancelled by the fourth vehicle actuation.

The fourth vehicle actuation, under the circumstances illustrated, did complete itself as is shown by the fact that the diagonal portion of the timing line of this UNIT EXTENSION touches the dotted circular timing-out line. In the particular case of Diagram No. 6 the Green Interval on Street "A" then terminates because condition B 3 provides that an "Actuation on 'B' Street occurs during a unit extension and there are a few partially-timed unit extensions on 'A' Street".

The functioning of the EXTENSION LIMIT TIMING (IF and WHEN initiated) is also shown particularly as it acts in regard to the various possibilities of timing occuring simultaneously on the other side of the dotted circular timing out line.

The circumstances under which the EXTENSION LIMIT terminates the Green Interval on Street "A", in spite of actuations which continuously reset the timing of the UNIT EXTENSION, are shown in Diagram No. 7 and Diagram No. 8.

It is hoped that the diagrams may prove an aid toward visualizing the functioning of Traffic-Actuated Controllers and may also contribute something toward the advancement of this form of traffic control which has many possibilities and applications.

Martin Bruening (Assoc.), is Traffic Control Engineer, Milwaukee, Wisconsin, and chairman of the Institute Committee on Sale of Publications.

A Municipal Authority's Viewpoint of City Planning

PLANNING of cities seems reasonable—a conclusion which history supports. Until the factory era, planning was largely an art. The injection of industrial forces compelled a scientific approach to the resulting social and economic problems.

It is now conceded that social and economic surveys should determine what kind of city its inhabitants need. The scientific analysis of such facts will produce a practical and flexible plan. It will provide the relationships necessary for permanent values and it will work for a sound housing policy coordinated with highways, parks and public centers.

The Planning Commission or Board is the public body which gives official attention to this array of material and works out a comprehensive plan for the city. The Commission should be recognized as part of the official family. The general paucity of Commission powers is an indication of community apathy in the field.

The Planning Commission's first job is the preparation of a Master Plan, outlining the future physical development of the city. Preparation of the zoning plan is another important duty. Plans for rehabilitation of blighted areas should originate with the Planning Commission. The Commission assumes leadership in traffic studies.

Human betterment is the ultimate purpose of all planning. Planning is not a luxury—it is a necessity. It is the only practical method of guiding the expenditure of public funds to obtain the maximum of social and economic values. It prevents the decline of our physical resources.

Those communities with active Planning Boards received the greatest benefits from Public Works Programs during the depression.

Planning Costs

Some municipal governments are not prepared to handle the minimum demands of future planning from either the functional or personnel standpoints. Planning requires positive administration and, as to costs—probably five cents per capita is a workable minimum for cities which make their own surveys and studies.

Future studies will make *planning* one of the planks in a platform of true Americanism. To hold to the processes of unplanned exploitation of our physical and human resources will become a reactionary philosophy of unenlightened selfishness.

Mr. Henry G. Hodges, eminent authority on Municipal Administration and former Professor at the University of Cincinnati, writes as above in his book entitled, "City Management", published by Crofts & Co., N. Y.

The Arterial System in Community Development

by LESLIE WILLIAMS

THE relation of the corridors of a building to its use is something, but the connection between the traffic system of a city and that community's development is practically everything.

The main routes of traffic have been likened to the skeleton, the arteries and the nerve system of the human body. The arterial system is all this and more too. It is that dynamic element of the modern metropolis which breathes life into its static land use pattern. What manufacturing, commercial, residential, recreational, or public and institutional land uses could thrive and prosper in modern times without a functional circulatory system? There are no thriving modern cities without trafficways and by their thoroughfares are they known. New York, Chicago, Paris, London, Berlin —what would they be without their famous thoroughfares? Businesses, like people, are known by the streets on which they live. Thomas Carlyle referred to the street as the "living link carrying the living flood in and out".

The history and the greatness of modern metropoli are vividly told in terms of their transportation development. Transportation will be as important in deciding the future of our cities as site and locational factors were in their founding. The arterial system lends power and reputation to a community. It transcends political boundaries and coalesces the community with the regional and national economy of which it is an integral unit.

A city artery approaches the fourth dimension. People and goods flow along its channels. The appurtenances which line its borders provide shade, fire protection, illumination and direction. Overhead, telephone and power lines, and often elevated ways, are erected. Below its surface, water mains, sewers, gas and electric conduits, and sometimes subway lines, are buried. It is a source of light and air to abutting property and recreation to abutters.

Location of Arteries

The location and design of city trafficways are related to its economic development. A properly-planned system encourages travel and at the same time reduces the losses from accidents and congestion. It lowers the operation and maintenance cost of vehicles. Deliveries and commodities are provided more cheaply and land values become more stable. Stable values are fostered by spreading accessibility, so that all parts of a community are equally accessible and the transportation factor is minimized in site selection.

The sum total of the street area constitutes one of the largest land holdings in the community. In the average city, thirty to thirty-five percent of the area is in streets. In the nation's capital, streets occupy over fifty percent of its territory. Once street lines are plotted and trafficways constructed, they become the most stable land uses of the community. If functionally designed, the adjacent land values would be more stable.

Traffic arteries contribute to the development and the deterioration of a community. There are examples of the blighting effects of the naked traffic

current on neighboring property in practically every city, but there are too few examples of the effect an insulated traffic artery can have in creating new values and rejuvenating blighted areas along its borders. Traffic arteries aid or hinder the orderly and sound development of a community, depending upon their location, design and character. Slum areas, which have resisted other treatment, give way to the cleansing effect of a new traffic stream. If, by wise planning, the areas on both sides of the artery are redeveloped as self-contained units and the traffic stream is separated from the built-up land by proper insulation, then the stream of traffic will serve as a buffer strip against the spread of blight from other causes.

The "through" street of the past now gives way to the limited-access way of the motor age because the latter is more closely related to the natural structure of a city. A community is a cellular structure made up of land-use compartments, neighborhood units, recreational areas, manufacturing, wholesale, retail, financial and administrative zones. When this is recognized, *all arterial highways will be planned to cross our cities without slashing through neighborhood and business units, but rather by threading their way between the natural use zones, serving instead of searing the values contained therein.*

Decentralization Arrested

Early twentieth century thoroughfares, fashioned by widening and straightening of colonial cowpaths, entice business outward from the center, as the fingers from a hand. Businesses dependent upon accessibility, and others seeking prestige and advertising values, often to their detriment, gravitate toward the ever growing traffic stream and line its right of way. The star-shaped framework of business has, in recent years, become more lineal with occasional local shopping centers blossoming forth at the crossing of widened and newly-paved streets.

With improved transportation, people can escape from the smoke, smudge, dirt and dust of the central city. When this is accomplished by merely paving and widening ordinary streets and highways leading to and from the city, roadside blight, and, in some cases, suburban slums arise.

The building of a motorway system changes the lineal diffusion of business. A larger tributory area of potential customers is drawn closer to the central city. The lineal pattern is arrested and local centers at the interchanges take on new life. The widened and straightened thoroughfares continue to serve as feeder routes for strictly local traffic of considerable volume.

The modern arterial permits ingress as well as egress; but whereas the volumes of traffic, daily, moving in and out are greater, the flow of traffic is more controlled and the growth and expansion of business and population are more controllable.

When expansion takes place over a modern motorway, satellite communities are encouraged near the interchanges, and the central city is stimulated to compete with its newly forming satellites in providing modernized residential, business and industrial attractions. The suburban scattering of population and business is halted and existing suburban communities look to subdivision control and zoning as a means of preventing further diffusion and of encouraging regrouping on a neighborhood basis. The construction of arterial motorways tends to equalize and neutralize the centripetal and centrifugal forces acting within the metropolitan area.

A good arterial system reduces congestion in all parts of the city and encourages an efficient land-use pattern. Business streets attract business traffic; residential streets, residential traffic and so on. Trans-city traffic gravitates to the motorways and crosses the community longitudinally and latitudinally, or radially and circumferentially, depending upon the layout of the city. These trans-city arterials, servicing the cells as they traverse the city, should be extensions of national and state routes and ought to be supplemented with freeway or limited-access by-passes outside the city for intercity and overflow traffic.

The planning of the trans-city motorways should precede the layout of the by-passes to control decentralization, but the trans-city routes must connect with parking and other terminals in the commercial and industrial cells to render the greatest service to the community.

While it is true that our present street systems need more traffic planning and the application of more modern traffic engineering measures, downtown traffic congestion will not show much material relief until proper terminal and parking facilities are provided, improved public transportation service is rendered, and a comprehensive land-use plan is prepared to guide their future changes.

The close connection between community growth and the arterial system demonstrates the need for motorway construction within urban areas, but the extent and character of the system can be determined only by careful interpretation of a number of complicated factors. For example, the extent of an arterial system cannot be decided upon until the relative use of the automobile and public transportation in a metropolitan area has been carefully estimated.

Modes of Transportation

Current opinion indicates that private automobile transportation will not improve during 1944. Automobiles are being scrapped at an increasing rate, other automobiles are being laid up for repairs for longer periods, and further mileage restrictions are likely.

The present problem is how to maintain essential automobile transportation, for the pleasure car has disappeared as an immediate factor in traffic planning.

The primary post-war local transportation problem, however, hinges about the possible change-over in mode of transportation and the timing of highway improvements to meet changing traffic demands. Every community should maintain an inventory of its transportation resources and be continually evaluating the factors affecting its status.

Some motorists have learned to rely on public transportation; others have come to realize the essentiality of the automobile, especially industrial managements where war transportation conservation officers have been required.

Lifting of gasoline and tire restrictions and increasing the supply of automotive parts and the number of mechanics will automatically increase the use of the private automobile. When substantial numbers of new cars become available, annual automobile mileages will surpass pre-war levels. While this will increase street congestion, the continuation of some car-sharing and the retention of staggered hours, skip stops, and other wartime traffic measures, speeding up street movements, will temporarily aid both public and private vehicular flow, as will the abandonment of street car service, restored for the duration.

Improved public transportation means more than speedier and high frequency service, it must include a more convenient and comfortable service from residential areas to the downtown in the off peaks, and to industrial areas in the rush hours and it must provide more accessible and direct service to beaches, parks, and recreational areas. Improved crosstown service, better downtown waiting stations and zones, and fundamental changes will be necessary to meet competition in the post-war years.

From present indications, the rate of change in mode of transportation will be gradual and mass transportation travel will probably stabilize at a higher level than was experienced in the late thirties.

Other important factors affecting the rate of change in mode of transportation include:

1. Purchasing power of the average man.
2. Availability of properly planned and operated offstreet terminals for both private and commercial vehicles, and a general recognition that movement is the primary function of our thoroughfares.
3. Amount of motorway construction within urban areas.

In any case, the movement of people and goods within a community and between its various cells and those of other communities, warrants a high priority rating in post-war city planning programs.

An address by Leslie Williams, Editor of Traffic Engineering and Engineer-Director, Governor's Commission on Metropolitan Transportation, Providence, R. I., before the School for Planning and Zoning Officials, Municipal Training Institute of New York, Columbia University, New York, N. Y., Jan. 28, 1944.

TRAFFIC ENGINEERING TRAINING COMMITTEE

W. Graham Cole (Mem.), Assistant Secretary of the Metropolitan Life Insurance Company, and Chairman of the Traffic Engineering Training Committee of the Institute of Traffic Engineers, reports that his Committee is now beginning the development of a model graduate training curriculum in traffic engineering. The first step in this work involves rating various subjects according to importance. The check list or rating chart now being submitted to members of the Committee is reproduced herewith, and Chairman Cole is anxious to obtain reactions of all Institute members who may be interested in submitting their ideas.

SUBJECT	RATING Rate from 0 (no value) to 10 (very important)
1. Engineering	
a. Geometric Design	
b. Control Equipment	
2. Education	
3. Enforcement	
4. Public Administration	
5. Economics	
6. Statistics	
7. City Planning	
8. Legal Matters	
9. Public Finance	
10. Sociology	
11. Psychology	
12. Public Relations	

Members of the Traffic Engineering Training Committee are as follows:

Donald S. Berry
Harvey Booth
Theodore Forbes
Bruce Greenshields
Merwyn Kraft
C. C. Wiley
Henry Osborne
Walter Rosenwald
E. B. Lefferts
W. R. McConochie
Theodore Matson
Robert Mitchell
R. L. Morrison
Thomas Seburn
Sherman Smith
Lawrence Tuttle

Post-War Highways

by ROBERT MOSES

THE purposes of a post-war public works program should be: (1) to be ready immediately after the war to catch up on deferred construction and reconstruction, (2) to employ returning members of the armed forces and men discharged from war production, and (3) to stimulate private industry. Let it be understood that mere preliminary studies, sketches, and engineering generalizations will not serve the purpose at all. What we need are complete blueprints, specifications, estimates and bid proposals all salted away ready to be brought out at the appropriate time.

If we will concentrate on selecting and designing projects which commend themselves to the average citizen and taxpayer, work which should have been done anyway in the normal course of events, we will be ready with an adequate, sensible and conservative public works program.

There is no wholly satisfactory way of measuring the size of the post-war public works program, but experience, common sense and past records indicate that about five million jobs each year will have to be provided after the war while normal employment is being restored.

Road Construction

Highway projects are at the head of the list of practical post-war public works. They are quickly understood and accepted as necessary by the average citizen. They are spread all over the country. They are relatively easy to get under way compared to other more complicated public works and they create substantial employment both on and off the actual scene of the job. Moreover, we must assume that the automobile manufacturers will retool immediately after the war, using their old models and dies, and will turn out more cars after this retooling period than ever came off the assembly lines before. The products of this great American industry will be worthless unless the government supplies good roads on which they are to run.

Many of the new projects to be designed for post-war construction should be located in metropolitan centers throughout the nation, not only because the cities will form the main pools of unemployment after the war but also because the greater part of through traffic begins and ends in the cities and their suburban outskirts. Modern highway builders have thrown into the scrap heap the old rule based on by-passing congested centers of population in planning inter-regional highways.

Just where the funds will come from for actual construction of these post-war highways no one can say with certainty at the present time. Federal, state and municipal governments will all have to contribute. That the money will be forthcoming no one can question, because when it comes to a choice between public works or straight relief no one in the light of past experience will choose relief. It is, therefore, all the more important that we concentrate at this time on a sensible, straight-forward program of highway design and avoid wrangling over the eventual source and size of construction funds and other debatable matters which require no immediate solution.

Digest of a paper by Robert Moses, New York City Commissioner, Chairman of the Triborough Bridge Authority and New York Council of Parks and member New York Planning Commission, given before the American Roadbuilders' Association.

The Federal Post-War Highway Program

by WILLIAM J. COX

This article in no way represents the policy or opinion of the Institute of Traffic Engineers.

HOUSE of Representatives Bill 2426 and identical Senate Bill 971 represent the proposals sponsored by the American Association of State Highway Officials for a federal post-war highway program. The bills have been referred to the respective Roads Committees of the House and the Senate and it is understood that hearings before the House Committee will be held in February 1944. The proposed legislation would authorize a three billion dollar three-year post-war program, with matching by the states on a 75% federal, 25% state basis. Apportionment of funds between the states is provided ½ on the basis of population, ¼ on area and ¼ on post road mileage.

Of the purpose of the bill—to improve the nation's highway facilities through carefully matured plans, executed under competitive bids by private contractors—I offer no criticism. It is a worthy and desirable purpose. I insist, however, that this proposed program is no normal federal highway aid program. When it is proposed that there be annually an eight-fold expansion of the 1942 appropriation, it is evident that we are dealing with new conditions, for which the past affords no certain precedents. This proposal must be weighed not merely in the light of the past, but strictly upon its own merits. Three billion dollars of federal money in a single piece of legislation is enough to have an identity all its own.

The proposed bills have two major weaknesses—the proposed basis of apportionment to the states, and the proposed basis of federal-state participation in expenditures.

Apportionment of Funds

The proposed apportionment ½ on population, ¼ on area and ¼ on post road mileage represents a modification of the old federal highway aid formula which weighted each of these factors 1/3. The fact that the framers of the pending legislation have made a change from the traditional formula establishes the fact that even they recognize the inequity of attempting now to use the 1916 formula. While the framers of the legislation have made an attempt to modify the old formula, in this modification they made no attempt to take advantage of the large amount of factual information now available regarding the road systems and road needs of the states. In 1916 it might have been justifiable to use these three factors as measures of road need since we then had practically no data regarding the road needs of the states or of the factors which determine such needs. However, since then there have been tremendous changes in the character of our roads and in the motor vehicle traffic which they serve. It seems self-evident that the more perfectly a formula fitted the 1916 problem of getting the country out of the mud, the less likely it

would be to meet the most serious 1945 problem of breaking the stranglehold of traffic congestion. Furthermore—and fortunately—through the state-wide highway planning surveys which have been conducted in all of the states under the joint sponsorship of the Public Roads Administration and the state highway departments, we now have comparable factual data on roads and traffic in all of the states.

Without having the benefit of such completely comparable estimates of road needs as could be readily prepared by the Public Roads Administration acting in cooperation with all of the states, we have been able to make some evaluations which definitely establish two things. One is the need for such completely comparable estimates before the tremendous appropriation of three billion dollars is authorized for apportionment to the states, and the other is the great inequity in the proposal as it now stands when compared with the best available measures of road needs of the states.

In response to the request of the American Association of State Highway Officials in July 1943 the state highway departments of all the states furnished the Association with their own estimates of their immediate road needs. These estimates, giving a U. S. total of seven billion dollars, were published in the October issue of *American Highways*. We have related the proposed apportionment under H. R. 2426 to those estimates, state by state. From the tremendous variation which is found between the relationship from state to state it is obvious that the proposed apportionment is tremendously inequitable, viewed from the standpoint of road needs. The apportionment of federal funds would more than meet the needs of some states while leaving those of others almost undiminished.

Unemployment Relief

The American Association of State Highway Officials has insisted the apportionment of funds should be considered on the basis of road needs. However, it must be recognized that a program of the magnitude considered will not be authorized at this time except for the value generally credited to public works in the relief of unemployment conditions as are likely to occur in the period immediately following the war. Therefore, regardless of the basis of determining how the apportionment shall be made between the states, the relationship of that apportionment to the probable need for public works is significant. The Bureau of Labor Statistics of the U. S. Department of Labor published in the *Monthly Labor Review* (July 1943) estimates by states of military and industrial demobilization expected following the war. Comparison of the proposed apportionment of funds, with these estimates indicates that there is a very poor relationship in states between the apportionment of funds and the need for public works, as based on the Labor Department's estimates. Some states would receive more than $400 per demobilized person, while other states would receive less than $50. It is particularly significant that in general the states which are unfairly treated when the program is viewed from the standpoint of road needs are similarly treated from the standpoint of the prospective need of employment on public works.

One of the justifications offered for the magnitude of the proposed federal post-war highway program has been the fact that federal collections of taxes on gasoline, oil, motor vehicles, tires, automobile use, etc., have been considerably in excess of the amounts the federal government has been re-

turning to the states as federal highway aid. It has been argued that these special taxes upon the road users of the country should be dedicated to highway purposes. However, if this argument is carried to a logical conclusion, the apportionment of funds between the states must be consistent with the federal tax collection on road users from the states. But just as the proposed apportionment is inconsistent with road needs and with employment need, so also is it inconsistent with the federal motor vehicle imposts collected from the states. From whatever viewpoint the proposed federal post-war program is sought to be justified, the proposed apportionment of it is wholly inconsistent and unreasonable.

An abstract from a discussion by William J. Cox, Connecticut State Highway Commissioner, at the 9th Conference on Highway and Motor Vehicle Problems called by the New York Joint Legislative Committee on Interstate Cooperation and the Council on State Governments, December 1943. Copies of the complete discussion, from which this article was taken, can be obtained from the Connecticut State Highway Department upon request.

Traffic Planning and Highway Operations

by WILBUR S. SMITH

THE wide latitude of traffic creates problems of operations and planning that challenge the abilities and resources of highway officials. In early stages of highway development, concern was with more and more miles of improved roads. Highway accidents and congestion did not receive serious attention until the Twenties. The highway transportation profession has today reached a stage of specialization.

Confusion of Terms

Considerable confusion exists in the meaning of "planning", "traffic", and "operations", as they apply to state highway departments. They have been used singly and with other words to connote a wide variety of functions. An agreement between all agencies concerned as to what is embraced by each (regardless of title) will clarify the scope, procedures, organization, administration and research that are necessary to insure the establishment of these functions in their proper relationship to each other and to all other functions of state highway departments.

These terms are widely used, whether understood or not. By 1941 every state had a Highway Planning Survey and about one-half of the states also had Traffic Engineering Bureaus. In addition, several Maintenance Bureaus had formal branches of traffic engineering.

Highway Planning

Before discussing the elements of traffic planning, it is necessary to develop the relationship of traffic planning to the broader, more comprehensive field of general highway planning. Traffic planning is but one component of highway planning. Because of its very nature, highway planning is a broad staff function which includes every activity and bureau of the highway department. It includes not only the immediate day-to-day work of the department, but also the

development of long-range programs and schedules. Traffic planning is a line function which relates only to traffic movements, or to the operation of vehicles on roadways. Traffic planning is a function of the bureau in the highway department which is responsible for matters of traffic operation. In like manner, all other bureaus should be responsible for the planning which relates to their particular functions. Only by such an arrangement is it possible to have planning activities of each unit of the highway department properly coordinated and inter-related, one for the good of the other, so that a complete plan may be developed as a staff function of the Chief Highway Engineer and the Commissioners.

Highway planning in its broad sense cannot relate solely to traffic; it must include finance, design, construction methods, personnel relations and all the other engineering and business functions of the department. It is true that traffic volumes and character should influence, in part, all highway activities, but it is not proper to develop over-all highway planning on the basis of traffic alone.

The establishment of a central Highway Planning Bureau is the logical solution to problems of coordinating departmental planning activities. Traffic is but one unit of the department. Such a bureau can provide the means for an exchange of information between bureaus, and perhaps most important, can stimulate planning throughout the department. A staff organization devoted to planning and research is common in large business corporations.

Traffic Planning

Traffic planning, as one component of highway planning, involves all matters necessary for the *development of a clear statement of traffic needs,* setting forth what will be needed to accomodate persons and vehicles with optimum safety and efficiency. It is necessary to have facts about abilities and limitations of drivers and pedestrians, operational characteristics of vehicles, and functional details for different roadway control and traffic conditions. Such facts should relate not only to the single traffic unit, but also to the broad characteristics and trends of a general traffic stream.

Financial Planning Studies and Road Inventories which are essential to general highway planning seem more closely related to the functions of the finance and construction units than to the traffic unit, and should therefore be considered primarily as activities of those departments. On the other hand, traffic studies and road use studies should be an integral part of the traffic unit and thereby considered a function of traffic planning.

Highway Operations

Highway traffic operation includes those functions of the Highway Department which have to do directly with the safe and efficient movement of vehicles and pedestrians on public ways. To place responsibility properly, all these functions should be assigned to a separate unit of the state highway agency, on an equal plane with maintenance, construction, personnel, design and all the other primary units.

While all matters directly related to traffic movements should be in the traffic unit, it is just as important that unrelated, or remotely related functions should not be included.

There is general agreement on the following items as principal "operations" functions: (1) Traffic surveys and road use studies(accident studies included); (2) Traffic control devices, including rural highway lighting, (all functions except erection and

maintenance); (3) Rules and regulations governing road use,—speed control, vehicle sizes, weights, etc.; (4) Geometric (functional) roadway design; (5) Permits for operations of oversize and overweight vehicles. Other operations functions suggested and which should be included are: (6) Traffic planning; (7) Research—driver, vehicle, and traffic characteristics, as they influence highway design, construction, maintenance, and over-all performance; (8) Economics (costs and benefits) of traffic—relation of facilities to land values, taxation, etc.; (9) Traffic routing; (10) Complaints relative to traffic and accidents; (11) Public education in all transportation matters of highway department.

Looking Ahead

An adequate Traffic Operations or Transportation Bureau is desired in every state highway department. Now, and in the immediate reorganization of highway departments at the close of the war, seems an especially opportune time to set up such major bureaus, assigning them basic functions listed above and combining traffic planning and operations functions of highway planning surveys, traffic engineering, maintenance, and other divisions. It would be impractical to attempt to develop here an over-all, ideal, highway organization plan because state government policies, basic organization factors, personalities, and other variables must be considered. *It makes no great difference what the bureau is called, so long as the organization and assignment of duties are proper.*

Work of repairing, improving, and extending present roadways, as well as new construction programs anticipated, will require extensive traffic planning and operations studies. Some are: (1) parking and terminal facilities in cities; (2) state participation in development of highways through cities, and traffic control thereon; (3) limited-access legislation; (4) speed control; (5) relationship of roadways to industrial development; (6) improving traffic operations on existing roads; (7) road improvements based on demands of traffic rather than politics; and (8) value of actual traffic time to auto users. Highway officials realize that they will be faced with these and other traffic operation problems and they acknowledge the need for basic studies and investigations on which to base planning and other activities.

Ideas of officials are important in indicating the necessity for research, but once research is begun it is likely to guide itself, opening up new paths as it goes along. A big difficulty is that initial returns may be slow and research might reveal defects which are difficult to explain to the public.

Not all this basic research should be left to individual highway departments. Most findings will have wide application and should, therefore, be derived by national agencies in cooperation with states.

Simplicity and cooperation cannot be over-stressed relative to traffic planning and highway operations. In the past, many of those engaged in these activities have been guilty of developing strange lingo and aloof attitudes toward other highway activities. This is unfortunate and must be overcome so that the Operations or Transportation Bureau will be an integral and accepted component of highway departments. The best thinking of the most competent individuals will be required. There is no time for pretext or extravagant and fantastic proposals.

Presented at Annual Meeting, American Association of State Highway Officials, Committee on Traffic Engineering and Planning, Chicago, December 2, 1943, by Wilbur S. Smith (Mem.), Bureau for Street Traffic Research, Yale University, New Haven, Conn.

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Slingshot sabotage can seriously impede the war effort in your city. Help prevent the hazards and waste caused by damage to street lights.

THE Government has recognized the wartime importance of traffic safety lighting by granting high priorities and by allotting sufficient materials to maintain every lighting system efficiently.

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1. Conduct educational campaigns in the schools and through newspapers to combat thoughtless and malicious destruction.

2. Urge the public to report conditions which may cause service interruptions. These can then be corrected on regular service calls, saving the expense of emergency calls.

3. Request citizens to report damaged street lights promptly, in order to have service restored as quickly as possible. When any parts of the lighting equipment, such as canopies or sockets, are found on the ground, they should be picked up and returned to the utility.

4. Instruct the police department to give all possible protection to the lighting equipment.

5. Publicize any arrests or convictions for the breaking of street lights. Point out the grave results which may occur. Public safety demands the proper maintenance of street-lighting systems.

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Highway Officials on Post-War Highways

TRANSPORTATION needs, not employment, will be the primary needs to be met by immediate post-war traffic improvements, according to highway officials meeting in annual convention of the American Association of State Highway Officials.

"Boldly done" planning of rural and urban highway improvements, to cope with congestion and accident problems that will come with greatly increased post-war traffic, is the nation's immediate highway need, declared Brady Gentry, Texas highway department chairman.

Highlights of Gentry's address follow:

1. Highway transportation in this war has made possible our military production record. A national policy of preparedness in the future calls for the Federal Government to increase its average contribution to highway improvements above the one-fifth of total expenditures, which governed in the past.

2. Construction standards which fail to anticipate and provide for future traffic demands waste money.

3. Increased Federal aid, under the traditional matching-of-funds principle, is the best hope of catching up with highway demands. The alternative is a public demand for federalization of highways.

4. The work of highway officials in preparation for post-war action will exert a profound influence on the future course of highway development. Whether or not we ever have unemployment again, we must have the funds needed for improving transportation facilities. The need for such facilities is even greater in time of prosperity than of unemployment.

Maj. Gen. Philip B. Flemming, administrator, Federal Works Agency, another principal speaker, declared:

Highways are being pounded to pieces by heavy war-time traffic. Interrupted public works on streets and highways makes the future problem not one of post-war public works, but *postponed* public works. The deficiencies will be made good eventually. Our concern is to see that they are made good right after the war, when the work will contribute to general recovery. The Bureau of Labor Statistics estimates that 14½ million persons must be adjusted in new jobs after the war, or more than 32 per cent of 1940 employment.

Soundly planned public works, however, are justified for their own sake, not just for employment. Post-war public works must start immediately after hostilities, which means working drawings and specifications completed in advance, right-of-way acquired, and contract documents executed. But they must be planned soundly, because highways have a profound effect on the development of land and cities. They can stimulate growth, or stunt growth; build towns, and wipe out towns.

Congressman J. W. Robinson (D-Utah), chairman, House Roads Committee, pointed out the following in his address before the State Highway Officials:

Congress wants highway construction in the first three-post-war years to be four times as high as in any previous period. No other public works

program can be ready in time to help during reconversion. Federal - State highway projects must total $2 billion a year, employing a million men on and off-site. Congress has authorized a planning program which today should be bringing to completion the preparations for $2½ billions in construction. Actually, checkups show only $700 million in projects being planned today. Including both Federal and non-Federal state highway programs, today's total ready for construction is $500 million, with $800 million the expected total by Spring. A $750 million state-local maintenance program also is ready for the first post-war year.

H. R. 2426

"Except in the highway field, there is no such thing in America today as a public works program ready to go. And I regret to state my fear that the highway program is not as far advanced as it should be, in view of the special need for timing construction to start quickly after the war.

"You well know that planning progress has been slow, except in a few states. That is one reason why you are urging immediate action by Congress on the pending legislation, so that you can plot your course with more assurance and greater speed. I for one will do my utmost for early action on H. R. 2426.

"On our main highways, the war is building up the greatest backlog of construction and maintenance work in history. This Association itself lists construction needs at over seven *billion* dollars on main highways alone. On these main roads, the job will be to make up lost time.

"But we also have something else to do. We must overcome comparative neglect of the two ends of our highway system—the city end, and the secondary roads that directly serve farms, mines, timberlands, and other natural resources.

"The pending bill in Congress attempts, on your recommendation, to cope with these two needs. The problems vary among the states of course —a fact which the pending bill seeks to recognize.

The Urban Job

"In the urban highway picture, ripples are now appearing on municipal waters that have long been undisturbed. Some have become sizeable little waves, with state highway departments showing a refreshing attitude of cooperation.

"Many cities have had a breathing spell, during the war, from the chaos of decentralization and street and parking congestion that has come about since our highway transportation system grew into a giant. But now they are awakening to the urgency for planning for the day when automobiles again will increase in number.

"The urban job must be done. If you, the state highway officials, do not cooperate in the doing of it, our cities would find ways of by-passing you, and doing the job some other way. I firmly believe that would bring about grave problems, and that the emphasis on a nationally integrated highway system which you have struggled to maintain would be destroyed.

"States recognize the short-trip character of highway travel, and that by solving congestion they will guarantee that motorists who pay the cost of highways will find tomorrow's roads of increasing service to them. Diversion should end now, while general state revenues are high. Get projects ready for bids. Use private engineering firms, and joint arrangements with cities and counties, to use all available engineers to overcome planning personnel shortages."

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Thomas H. MacDonald, U. S. Commissioner of Public Roads, delivered a paper on the Future Highway Program, highlights of which follow:

Wartime maintenance problems will be intensified in coming months. Surplus equipment being taken from Federal agencies by Treasury and states will get first choice on it. Highway Traffic Advisory Committee meetings in Service Command areas brought decentralized operations for Transportation Zones, making for greater war transport effectiveness, and improved WPB requisition procedures. In post-war period, local and state initiative in highway development must be preserved and enlarged, by greater integration of activities of local governments, by Federal stimulation of this move. One third more employment will be needed after the war on highways, than in past periods, to overcome wartime deficiencies and pre-war inadequacies. A second or "stand-by" program also is needed, to be used during periods of depression to stimulate the economy through increased work on needed projects.

Post-War Construction

Construction is an essential element of the national economy, but emphasis must be on the type that stimulates private enterprise. The normal post-war highway minimum should be $2.5 billions, including $1.7 billions for construction, the total employing 1.7 million men per year. This equals the expected early post-war highway receipts from all sources. The "stand-by" program should average $1.5 billions annually, and 973,000 jobs. All these figures are based on actual studies of expenditures over long past periods.

Urban and Suburban Needs

Because 90 per cent of all highway trips are less than 35 miles, the highway improvement needs in and near cities are almost unlimited in scope. This field will be explored in a forthcoming report on the national interregional highway system. The vast mileage of unneeded minor rural roads now getting public funds can be cut substantially—but the reductions must come with the consent of the local interests involved.

This can be accomplished by education and persuasion, based on the highway planning survey data. Enough experience exists to prove the job can be done, working with the land-use planning committee of state agricultural colleges. In these special urban and rural fields—the latter one of providing good secondary systems and improving school bus and postal routes—there are vast opportunities for useful extra employment after normal basic highway programs have been given priority.

We have two million nine hundred and sixty thousand miles of rural roads. In recent years, a 10 per cent Federal Aid Secondary system has been established. Under provisions of H. R. 2426, the permissible Federal Aid Secondary mileage can be doubled, making it a 20 per cent system. The pending bill would authorize about three hundred million dollars a year in Federal aid for secondary roads—the largest local-road program in history.

Adding this 20 per cent secondary system to the 12 per cent primary system, we find 32 per cent of all rural roads would be covered by the proposed State-Federal program, or a total of nearly a million miles of rural roads. Because of the sheer mileage involved, this rural program probably will continue to receive the larger share of total highway expenditures for many years to come.

All this leads to the question of how to pay for these roads. As we all know, the main source of highway

revenue is the highway user himself, who according to authoritative federal surveys has more than paid for his proper share of the costs of highways in years past, in the form of gasoline and license fees, and other excise taxes, local, state, and national.

From this we come to the clear conclusion, backed by exhaustive data from your own highway planning surveys, that it is the heavy-traffic routes which alone show a net tax-revenue profit. It is the heavy-traffic routes which make it possible to build the other needed roads that carry lesser traffic.

In one major particular, therefore, the post-war planning program should mark a definite change in American highway progress. From your own monumental highway planning surveys of recent years, you have shown the nation that highway needs are changing somewhat, from those of providing all-weather communication lines, to those of providing transportation lines capable of handling large volume of traffic safely and efficiently.

The change is in itself a tribute to the job you have done in the earlier stages of highway development. The American highway transportation system is maturing, is firmly established, and well patronized.

But the change also clearly indicates that the road building policies which were practical in earlier years are not always practical engineering methods today. The "stage construction" program is more and more reaching a point where future attention must be concentrated heavily on design and location of roads more nearly representing ultimate standards of highway utility.

To put aside some of the routine that has been well learned, and to give increasing attention to transportation problems as they lead into the heart of our cities—these are not easy things to do. And while there remains ample unfinished business in our routine fields, we naturally dislike to trod the troublesome and uncharted paths that lead into the new fields.

Perhaps that is partly the reason why only a third of the 1941 planning fund has been allotted to definite projects. It is, however, very refreshing to note that well over 1,000 miles of limited-access highways have been programmed by the states under this 1941 Act. Unquestionably, momentum will pick up in this field of ultimate design, and especially the urban phase, in the coming months.

MORE ROAD MAINTENANCE IS REQUIRED—

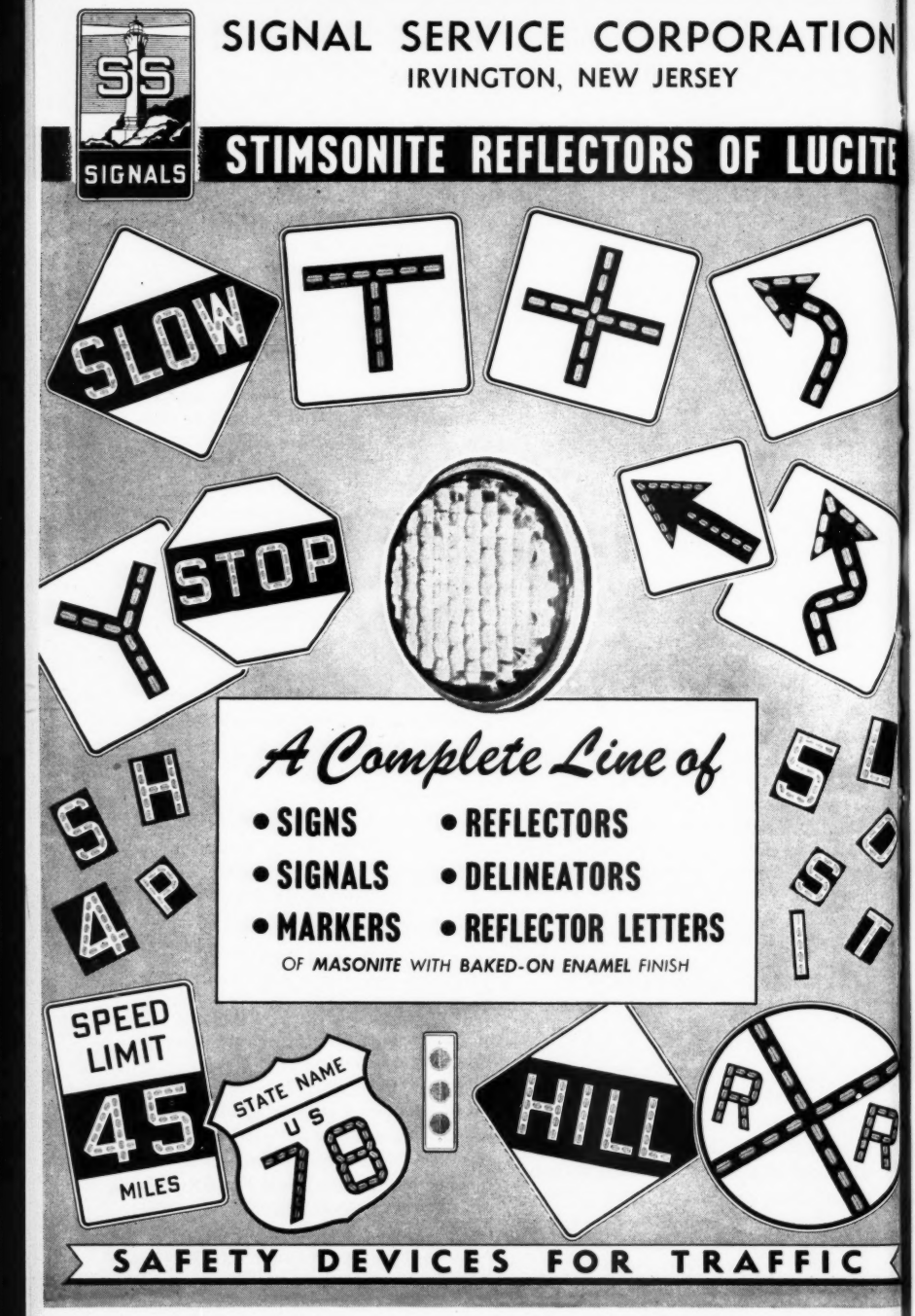
because truck traffic — which is the most destructive element of road traffic — is above normal; passenger car traffic, especially around large cities, continues at a fairly high rate and the sharp decline in road maintenance, made necessary by the war, have placed a greater burden on existing surfaces.

(from Engineering News-Record)

$100,000 TO OUTLAW THE WORD "POST-WAR"

and start a planning program at once to continue community planning on a long-range basis, has been established for the work of the Louisville Area Development Association during the next two years.

This recently organized metropolitan planning agency is a civic nonprofit corporation whose newly elected president is Wilson W. Wyatt, Mayor of Louisville.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POST-WAR TRAFFIC VOLUMES

Scanning the horizon of post-war highway developments, students of economics are beginning to inquire more directly into the matter of motor vehicle traffic in the years to come. The latest official estimate of future rural motor vehicle traffic was made in the Public Roads Administration study "Toll Roads and Free Roads" which forecast a doubling of 1936 vehicle miles on rural roads by 1960.

Various unofficial estimates run to about 50 million vehicles on the highways by 1950 and foresee a doubling of 1941 traffic totals in the same year. One prominent highway economist makes the following estimates:

We had 11 persons per vehicle in 1920, and 4 in 1940. This trend will continue to 3.5 in 1950. With the factor of population increase added, this will mean approximately 40 million vehicles by 1950.

"The trend in more mileage per year per vehicle has been even more marked than has been the registration rise. Because post-war cars will cost less to operate, due to improved motors and fuels, probable lighter weights, etc.; and because our whole economy is increasingly geared to highway transportation, the miles-per-car increase will be even faster than the registration increase."

Vehicle miles traveled in 1950 will depend upon general economic conditions and other variable factors. Some unofficial sources estimate that total traffic will be double the pre-war total (34 million cars averaging 8,000 miles each annually) if by 1950 we have 40 million vehicles averaging something over 13,000 miles per vehicle per year.

ITE NEWS AND PERSONALS

Who's Who Among I.T.E. Members

This is the third of a series of articles featuring outstanding members of the Institute of Traffic Engineers. Last month this space was devoted to Thomas Harris MacDonald.

PAUL GRAY HOFFMAN was born in Chicago on April 26, 1891, and he graduated from Lyons Township High School at LaGrange, Ill. He entered the University of Chicago in 1908 with the intention of acquiring a legal education but decided, after one year, that business had greater appeal. The automobile was in its infancy and young Hoffman went to work as a porter for the Chicago distributor of the Halladay car. Shortly, he was put in charge of the shop. When the Halladay distributorship became the property of Charles M. Hayes, (who organized the Chicago Motor Club), the new owner suggested that Hoffman try his hand at selling.

Automobile selling at that time was in the hands of gentlemen sportsmen and rich men's sons. The Southern Bar was a popular rendezvous. Hoffman, then 19, decided that he couldn't sell many cars to competitive salesmen and, as a consequence, spent his time soliciting business in smaller towns and cities around Chicago. Soon his sales exceeded those of all the other four men employed by Hayes.

In 1910 the Hoffman family moved to Los Angeles. Paul got a job with the Studebaker dealer there. Hoffman's success as a salesman culminated in his winning a national sales contest in 1914. He was made sales manager of the Los Angeles retail branch in 1915 and in 1917 became branch manager of the district.

Hoffman joined the Army as a private after the outbreak of World War I. He was a first lieutenant in charge of transportation at Camp Jackson, S. C., when the Armistice was signed. Upon his return to civil life he turned down the managership of the Studebaker New York branch and purchased the Studebaker retail branch in Los Angeles. Within a few months the Paul G. Hoffman Company was

recognized as one of the most successful dealerships in America.

In 1925 Hoffman accepted the position of vice-president in charge of sales for The Studebaker Corporation at South Bend. In 1935 he was elected president.

Hoffman has given freely of his time to the advancement of highway safety. He was president of the Automotive Safety Foundation from its inception in 1936 until 1942 when he was named its chairman. This organization carries on educational safety work for the whole automobile industry and has, under Hoffman's administration, become a vital force in the reduction of traffic accidents.

Hoffman is also chairman of the Committee for Economic Development and vice-chairman of the Business Advisory Council, Department of Commerce. He is a class "C" director of the Chicago Federal Reserve Bank, and last June was elected to the board of directors of United Air Lines. He is a director and vice-president of the Automotive Council for War Production and a director and vice-president of the Automobile Manufacturers Association. He is also chairman of the Association's Highway Committee. He is a trustee of the University of Chicago, a trustee of Kenyon College, and a member of the visiting committee, Department of Government, Harvard University. For the past two years he has served as national chairman of United China Relief. He has collaborated in the writing of two books, "Seven Roads to Safety" and "Merchandising of Used Cars," as well as numerous magazine articles.

Hoffman is the father of five sons and two daughters. His five sons are in the Armed Services.

New York I.T.E. Section Meeting

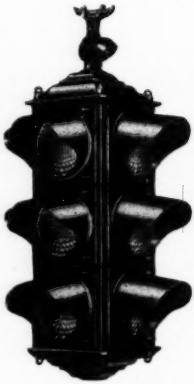
Thursday evening, January 20th, was the occasion of the 3rd meeting of the New York Section, when 20 members of the Institute and three guests assembled at the Hotel Holley. The evening was high-lighted with a talk presented by Lloyd Braff (Assoc.), of the Detroit Traffic Engineering Bureau, who discussed the proposed Detroit expressway facilities.

Mr. Braff illustrated his talk with colorful charts, one of which showed the origins and destinations of Detroit workers, based on information obtained from 300,000 people in connection with group-riding plans. The system of expressways will total 148 miles, and will cost 438 million dollars.

Ken Martin Téd Matson Nathan Cherniack

Out-of-town members attending the meeting were Ken Mackall, Grant Mickle, and Burton Marsh.

The next meeting will be held on February 24th at the Holley Hotel, and any out-of-town Institute members who may be in New York on that date are cordially invited to attend.



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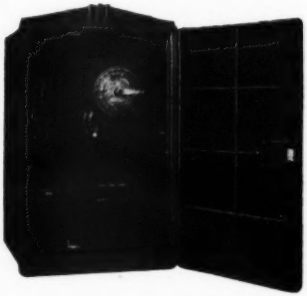

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PERSONALS

CHARLES S. CUNNINGHAM (Mem.), Traffic Planner, Pittsburgh Bureau of Traffic Planning, was the recipient recently of this little gem, in connection with his accident reporting system:

"Dear Sir:—
Received your letter of Jan. 11, 1944, stating that I should of made a report out on the accident I was involved in.

I think you are wrong in demanding this. For the man I hit was a good friend of mine. He was also drunk and run in the way of my machine. The Cop, that saw the accident, suggested I take him to the Hospital for observation, which I did. There, they said he was all right and he wasn't even hurt no place. That leaves no damage to him. My car was not even damaged in the least. That leaves no damage there. In other words, there was no damage any place. So, I didn't make out a report because it was not necessary. That's the set-up on this accident."

TOM WILLIER (Mem.) has resigned as City Traffic Engineer and War Transportation Administrator of Houston, Texas, to accept a position as Assistant Professor and Research Associate in the Bureau for Street Traffic Research at Yale University. Mr. Willier has been with the City of Houston since April, 1940. In the new position, he will devote a large share of his time to traffic research with special attention to parking.

LIEUT. (J.g.) ROGER GILMAN (Jun.), on board the U.S.S. Arkansas, writes, in part, as follows, "While not exactly in the midst of my old problems of traffic control, there are matters which come up, resembling some of the old work. The business of going to General Quarters on a battleship would be much more complicated if we didn't have the proper channelization, if I can use a solid T.E. word. . . . In the past 18 months I've seen a lot of places I never expected to see and as yet I haven't contributed anything to the sea, so the life seems to agree with me. Maybe I'll form a maritime branch of the I.T.E."

OTTO K. JELINEK (Mem.) has been promoted from Traffic Engineer to Planning Engineer of the Chicago Park District. His new duties and responsibilities are to serve as staff officer in the development of plans for the construction and extension of parks and park facilities, to study community and neighborhood demands for park recreation and traffic facilities and to prepare recommendations for meeting these demands.

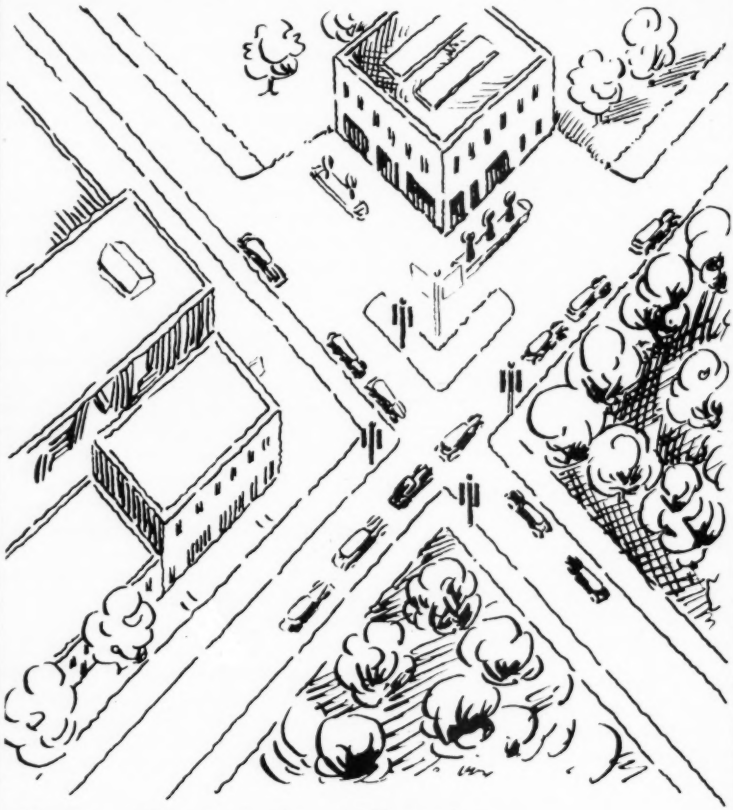
A. F. MALO (Assoc.), on January 1st, left his position as road engineer in the Michigan State Highway Department, to take a position with the City of Detroit as engineer in charge of the Detroit expressway program.

LIEUT. L. A. ANDRIACCHI (Assoc.), on leave, Michigan State Highway Department, is now assigned to the 6th Zone Transportation Office, 201 N. Wells, Chicago, Illinois.

CAPT. WARREN (SKINNAY) DE YOUNG (Assoc.), on leave as Division Manager, Automatic Signal Corporation, reports that "the fishing is good" at Fort Stevens, Oregon, where he is stationed.

ENSIGN CHARLES UPHAM, JR. (Jun.), writes, "I'm going to be shipped out of here within a month or so (Ithaca, N. Y.) . . . I just received the January issue of TRAFFIC ENGINEERING and think the piece done by Earl Allgaier "Predicting Traffic Death Rates" was very good. . . . I became a papa again, or for the second time, (gotta limit it), last Friday, January 21st. It is a girl this time."

HENRY W. OSBORNE (Mem.) is a proud father again. Robert Cogswell Osborne was born on Feb. 13, which is also "Hank's" birthday. Mother and baby were reported doing fine.



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Wanted—A Traffic Engineer

An unusual opportunity for a traffic engineer exists in Houston, Texas. Tom Willier, who recently resigned as Houston's Traffic Engineer, organized the Traffic Engineering Division there in April 1940 and developed it so that now the City Manager, other city officials and the public in general accept Traffic Engineering as an essential part of the city government. Houston has grown rapidly as an industrial center —the population is over 500,000 and motor vehicle traffic is at a pre-war level. A proposed expansion of the Traffic Engineering Division to handle existing traffic problems and aid in Post-War Planning has been approved and an appreciable budget increase is expected. Anyone interested in applying for the position of Traffic Engineer in Houston may obtain information by writing Wilbur Smith, Secy.-Treasurer of the Institute of Traffic Engineers.

LOOKING AHEAD

I.T.E. Board Meeting, New York City, Thursday, March 30th.

GREATER NEW YORK SAFETY COUNCIL Convention and Exposition, Hotel Pennsylvania, New York City, March 28th, 29th, and 30th. The Wednesday afternoon traffic session on "Current and Post-War Speed" is being jointly sponsored by the Institute of Traffic Engineers and the Council.

WASHINGTON, D. C., I.T.E. section meeting March 15.

NEW YORK I.T.E. section meetings, February 24 and March 30.

A.T.A. ELECTION: Results of the mail ballot for officers and members of the American Transit Association, as announced October 29, are as follows:

E. D. Merrill, president of Capital Transit Co., was elected to the office of president for one year. Colonel Roane Waring, president and general counsel of Memphis Street Railway Co., was elected to the office of vice-president for one year. E. A. Tuson, general auditor of Public Service Coordinated Transport, was returned to the office of treasurer for a like term.

Post-War Traffic Planning Committee

The third meeting of this Institute committee, headed up by Chairman Grant Mickle, (Mem.) Traffic Engineer, Automotive Safety Foundation, took place in New York City on January 20th. Three sub-committees were organized as follows:

Design principles for modern urban highways—Chairman, E. H. Holmes, (Assoc.) Senior Highway Engineer-Economist, Public Roads Administration.

Traffic Engineering Improvements, Chairman, T. M. Matson, (Mem.) Director, Yale Bureau for Street Traffic Research.

Traffic Engineer Organization and Administration, Co-Chairmen, Lloyd Braff (Assoc.) Detroit Traffic Engineering Bureau. Harry Neal (Mem.), Ohio State Traffic Engineer.

Specific assistance will be asked of many Institute members in developing the program of this most important planning committee, and Chairman Mickle has asked that any members who have suggestions or ideas get in touch with him.

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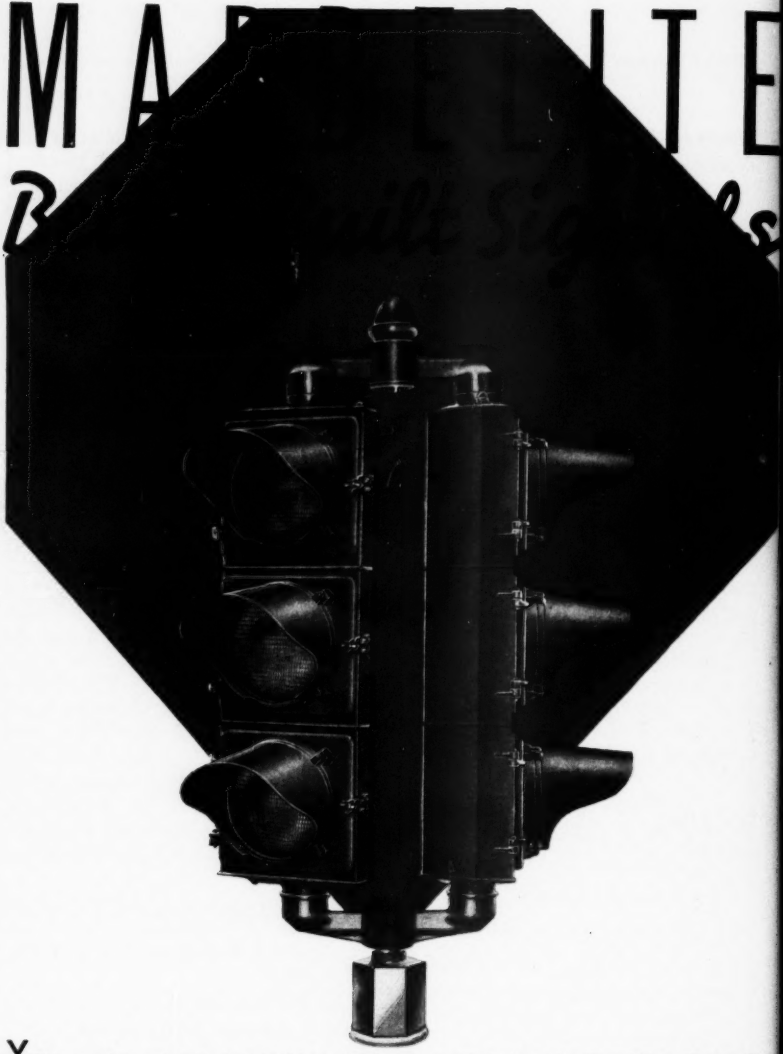

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